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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,369	11/25/2003	Henrik Bottcher	3968.098	6025
7590 06/28/2004				
PENDORF & CUTLIFF 5111 Memorial Highway Tampa, FL 33634-7356				
		EXAMINER ZACHARIA, RAMSEY E		
		ART UNIT 1773		
		PAPER NUMBER		

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/721,369	Applicant(s) BOTTCHER ET AL.	
	Examiner Ramsey Zacharia	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 17 and 18 are rendered indefinite because it is not clear whether or not the clause "having controlled chain length and/or polydispersity on solid substrate surfaces" applies to both elements (i) and (ii) or just to element (ii).

Moreover, it is unclear whether the phrase "on solid substrate surfaces" refers to the solid substrate surface of the recited in line 1 of claim 17 or some other solid surface.

4. Claim 19 is rendered indefinite because it is unclear if the phrase "as initiator for an ATRP-mechanism" at the end of the claim is referring to L, I, or some other element.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Eaton et al. (U.S. Patent 5,574,079).

Example 5 of Eaton et al. teach a panel coated with a composition comprising a polymer having a narrow polydispersity (column 5, lines 45-52).

7. Claims 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Guan et al. (U.S. Patent 6,071,980).

Guan et al. teach a polymer formed by an atom transfer radical polymerization process (column 1, lines 58-65). The process is a living polymerization process that results in polymers with narrow molecular weight distributions (column 4, lines 21-26). The polymer may be used as a coating (column 4, lines 37-38). As a coating, the material would necessarily be bonded to a surface.

Regarding claim 19, any polymer formed by atom transfer radical polymerization coated onto a substrate will inherently have a group anchoring it to the substrate (or else it would not be attached to the substrate) and a group that can initiate atom transfer radical polymerization (since atom transfer radical polymerization is a living process the initiator will remain active). The rest of the chain reads on the L group.

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8. Claims 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Matyjaszewski et al. (U.S. Patent 5,807,937).

Matyjaszewski et al. teach a polymer formed by atom transfer radical polymerization (column 6, lines 5-11). The polymer has a controlled polydispersity (column 8, lines 40-46). The polymer may be used as a paint, coating, or coating agent (column 6, lines 52-53). The atom transfer radical polymerization process is a living polymerization process (column 8, lines 47-58). As a paint, coating, or coating agent, the material would necessarily be bonded to a surface.

Regarding claim 19, any polymer formed by atom transfer radical polymerization coated onto a substrate will inherently have a group anchoring it to the substrate (or else it would not be attached to the substrate) and a group that can initiate atom transfer radical polymerization (since atom transfer radical polymerization is a living process the initiator will remain active). The rest of the chain reads on the L group.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 20 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Guan et al. (U.S. Patent 6,071,980).

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The coating of Guan et al. comprises all the structural limitations of claim 20 (a polymer formed by ATRP coated on a substrate) but does not teach that the coating is formed by the process recited in product claim 20.

However, the product of Guan et al. appears to be the same as the product of claim 20, even though Guan et al. uses a different process. While the product of claim 20 is formed by bonding initiator I to the substrate then carrying out ATRP polymerization initiated by I, initiating group I will move away from the substrate as the polymerization proceeds. Thus, the resulting product will be a polymer adhered to a substrate with a living initiating group. When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. In this case, since the product of Guan et al. appears to be the same as that of instant claim 20, the burden is on the applicant to conclusively demonstrate that product of claim 20 differs from that of Guan et al.

11. Claim 20 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matyjaszewski et al. (U.S. Patent 5,807,937).

The paint, coating, or coating agent of Matyjaszewski et al. comprises all the structural limitations of claim 20 (a polymer formed by ATRP coated on a substrate) but does not teach that the coating is formed by the process recited in product claim 20.

However, the product of Matyjaszewski et al. appears to be the same as the product of claim 20, even though Matyjaszewski et al. uses a different process. While the product of claim 20 is formed by bonding initiator I to the substrate then carrying out ATRP polymerization initiated by I, initiating group I will move away from the substrate as the polymerization proceeds. Thus, the resulting product will be a polymer adhered to a substrate with a living initiating group. As outlined above, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art.

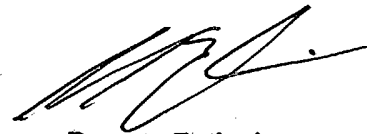
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700